

MILITARY SPECIFICATION SHEET
CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
50 OHMS, M17/111-RG303

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the cables described herein shall consist of this specification and the latest issue of MIL-C-17.

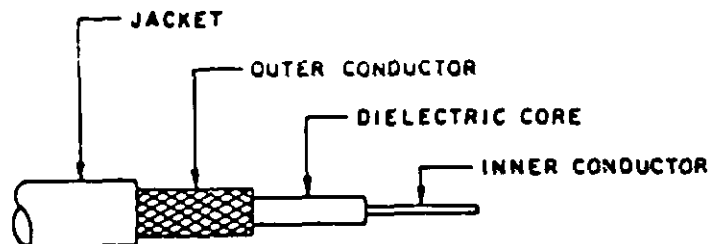


FIGURE 1. Configuration.

TABLE I. Description.

Component	Construction details
Inner conductor	Solid silver-coated, copper-covered steel wire. Diameter: 0.037 inch ± 0.001 .
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: 0.116 inch ± 0.005 .
Outer conductor	Single braid of AWG No. 36 silver-coated copper wire. Diameter: 0.146 inch maximum. Coverage : 94.9% nominal Carriers : 16 Ends : 7 Picks/inch : 11.5 $\pm 10\%$
Jacket	Type IX: FEP. Diameter: 0.170 inch ± 0.005 .

© denotes changes

FSC 6145

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

ENGINEERING INFORMATION:

Continuous working voltage: 1,400 V rms, maximum.

Operating frequency: 3 GHz, maximum.

Velocity of propagation: 69.5 percent, nominal.

Power rating: See figure 2.

Operating temperature range: -55°C to +200°C.

Inner conductor properties:

DC resistance (maximum at 20°C): 1.796 ohms per 100 feet.

Elongation: 1 percent, minimum.

Tensile strength: 110 klbf/inch², minimum.

Engineering note: This cable useful in general purpose, high temperature applications. (See connector series "TNC" and "BNC" per MIL-C-39012. NATO preferred type NWR-30.)

REQUIREMENTS:

Dimensions, configuration, and description: See figure 1 and table I.

Environmental and mechanical:

Visual and mechanical examination:

Out-of-roundness: Not applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 4 pounds, minimum; 15 pounds, maximum.

Aging stability: Not applicable.

① Stress-crack resistance: +230° ±5°C, mandrel size seven times the jacket diameter.

Outer conductor integrity: Not applicable.

Cold bend: -55°C ±2°C.

Dimensional stability: +200°C ±5°C.

Inner conductor from core: 0.125 inch, maximum.

Inner conductor from jacket: 0.187 inch, maximum.

Contamination: Not applicable.

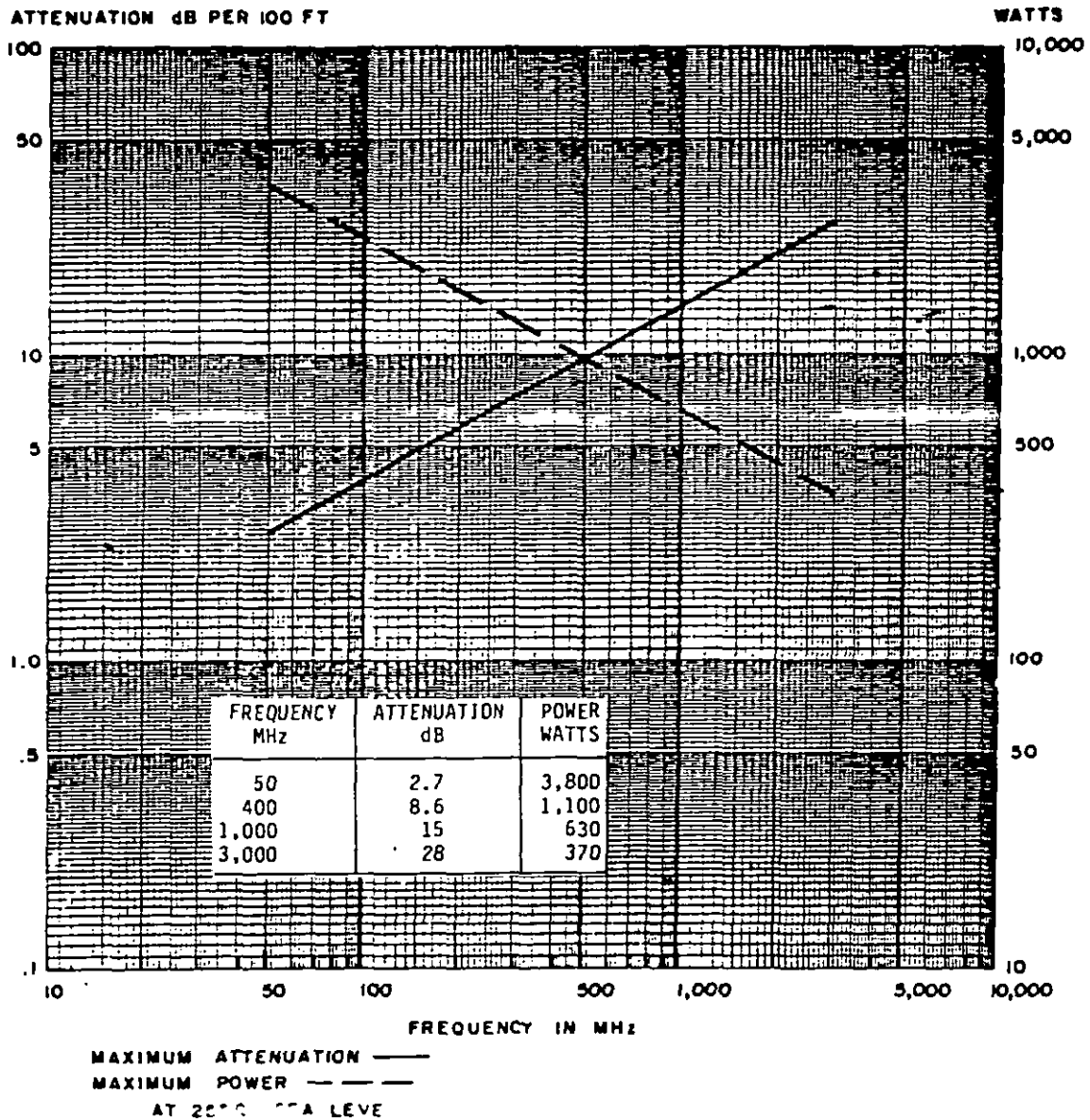
Bendability: Not applicable.

Flammability: Applicable.

Weight: 0.031 pound per foot, maximum.

Electrical:

Continuity: Applicable.



Tabulated values are for reference only.
The values on the chart represent the requirements.

FIGURE 2. Power rating and attenuation.

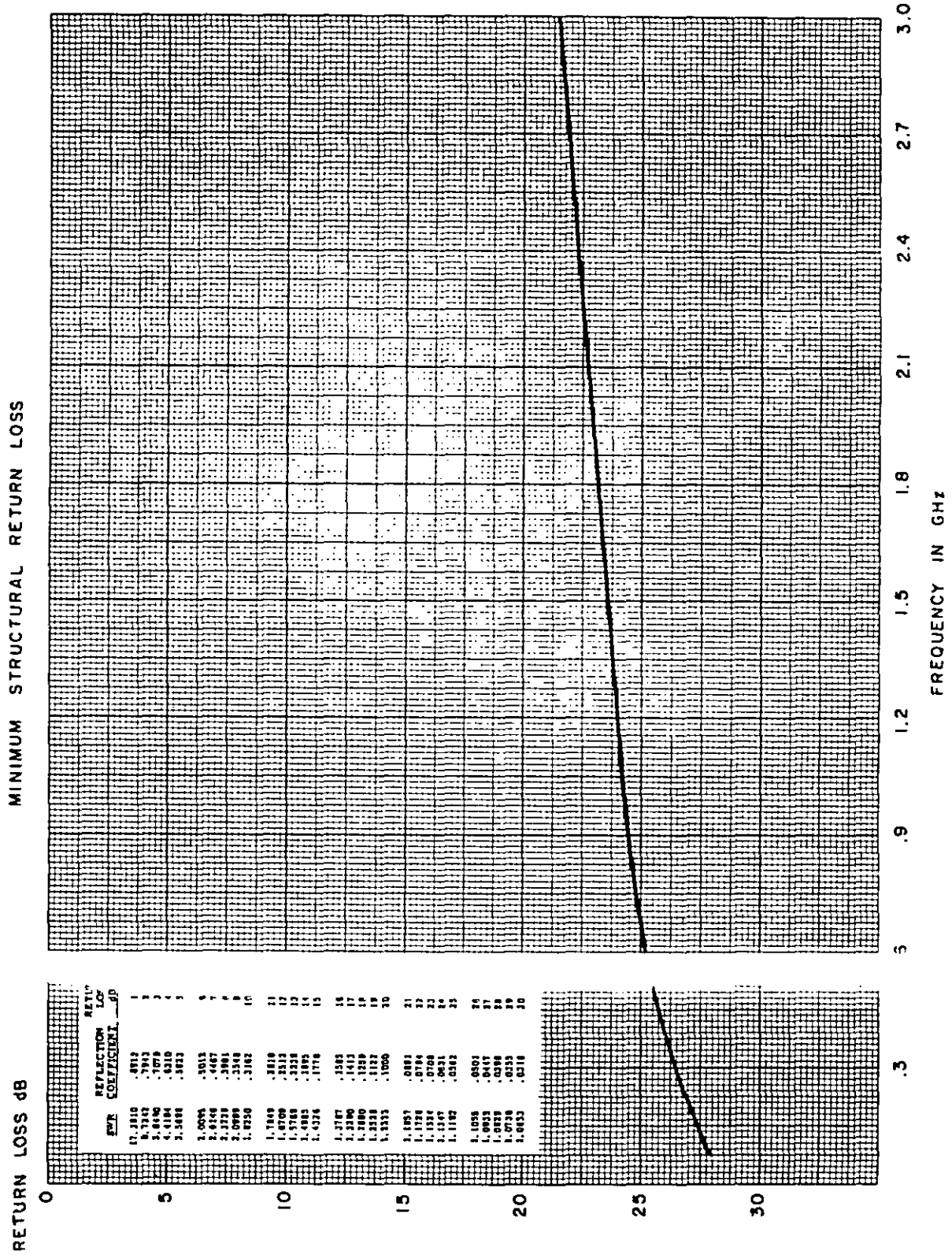


FIGURE 3. Structural return loss.

- ③ Spark test: 2,000 V rms, +10%, -0%.
 - ③ Voltage withstanding: 5,000 V rms, +10%, -0%.
 - Insulation resistance: Not applicable.
 - Corona extinction voltage: 1,900 V rms, minimum.
 - Characteristic impedance: 50 ohms \pm 2.
 - Attenuation: See figure 2.
 - Structural return loss: See figure 3.
 - ③ Capacitance: 32 pF per foot maximum.
 - Capacitance stability: Not applicable.
 - Capacitance unbalance: Not applicable.
 - Transmission unbalance: Not applicable.
 - Mechanically induced noise voltage: Not applicable.
 - Time delay: Not applicable.
- Part number: M17/111-RG303.

Custodians:

Army - CR
 Navy - EC
 Air Force - 85

Preparing activity:

Army - CR

(Project 6145-0911-23)

Review activities:

Army - MI
 Navy - SH, TD
 Air Force - 11, 17, 99
 DLA - ES, IS

User activities:

Army - AR, AT, ME
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